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African American and Hispanic Student Engagement at Minority Serving and Predominantly White Institutions

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Abstract

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While scholars have examined HBCUs in terms of their educational effectiveness for African American students compared to PWIs, there is a lack of similar research on Hispanic students at HSIs and PWIs. This study uses data from the 2003 administration of the National Survey of Student Engagement (NSSE) to investigate whether HSIs appear to serve Hispanic students in similar ways that HBCUs serve African American students. The results suggest that the average Hispanic senior at an HSI looks quite similar to the average Hispanic senior at a PWI in terms of engagement, satisfaction with college, and gains in overall development, in contrast to the results for African American seniors who are more engaged at HBCUs than PWIs.

African American and Hispanic Student Engagement at Minority Serving and Predominantly White Institutions

College student development scholars have illustrated through various studies that the time and energy students at any institution devote to educationally purposeful activities (i.e., student engagement) is the greatest predictor of their cognitive and personal development (Astin, 1993; Pace, 1980; Pascarella & Terenzini, 1991). Studies also show that certain institutional practices are associated with high levels of student engagement. In particular, students gain more from their collegiate experience when they are at institutions that they perceive as inclusive and affirming and where performance expectations are clearly communicated and set at reasonably high levels (Chickering & Reisser, 1993; Education Commission of the States, 1995; Kuh, 2001; Kuh, Schuh, Whitt & Associates, 1991; Pascarella, 2001; Pascarella & Terenzini, 1991). In addition, educationally effective colleges and universities—those that add value to the student experience—direct students' efforts and energy toward appropriate tasks, activities, and behaviors and engage them in these activities at high levels (Educational Commission of the States, 1995).

Several strands of research document how students benefit differentially depending on the type of institution they attend. For example, research suggests that attending an historically Black college or university (HBCU) contributes significantly to student outcomes for African American students (Flowers, 2002; Outcalt & Skewes-Cox, 2002). However, similar research for Hispanic students attending Hispanic-serving institutions (HSIs) is difficult to find.

Given the continuously growing population of Hispanic students and the increasing number of institutions that gain HSI designation annually as a result of this demographic trend, the experience of Hispanic students at these campuses is important to examine. Notwithstanding

being the fastest growing segment of the college-going population, inquiry into the Hispanic student experience has not maintained a proportional pace. Researchers (Garcia, 2001; Hurtado & Carter, 1996; Rendon, 1994; Torres, 2003) have conducted considerable research on the Hispanic student experience but none of their studies have concentrated on the learning environments of institutions the federal government has specifically designated as serving this population. Empirical work that examines the Hispanic student experience at HSIs is practically non-existent at the present time. The substantial resources being directed toward these institutions by the federal government requires research that provides an understanding of their effectiveness for Hispanic students and an enhanced knowledge of their environmental dynamics for the benefit of future students, faculty, and federal and state legislators.

Significant research exists that compares different ethnic group experiences by campus type but the primary focus is on the African American student experience at HBCUs versus PWIs. Studies have been conducted at HBCUs that examine students' academic gains (Cabrera, Nora, Terenzini, Pascarella, & Hagedorn, 1999; DeSousa & Kuh, 1996; Flowers, 2002; Kim, 2002); the environmental impact on learning (Bohr, Pascarella, Nora, & Terenzini, 1995); psychosocial gains (Berger & Milem, 2000; Cheatham, Slaney, & Coleman, 1990); and African American students' openness to diversity (Flowers & Pascarella, 1999), to name a few. Most research on the HBCU experience is comparative in nature illuminating the different experiences of African American students at both types of institutions. Time and again these studies reveal a more satisfying experience that results in greater gains for African American students at HBCUs.

For this study, we use data from the 2003 administration of the National Survey of Student Engagement (NSSE) to explore the differences in the educational experiences of Hispanic students at HSIs and PWIs while providing a contrasting picture of the experiences of African

American students at HBCUs and PWIs. More specifically, we are interested in understanding how students' levels of engagement in effective educational practices, their satisfaction with college, and their perception of how much they have gained from college in terms of personal and intellectual development differ for Hispanics and African Americans across institutional contexts. This paper provides a unique contribution to the existing literature simply by comparing Hispanic student experiences at HSIs and PWIs. In addition, this study builds on and adds to the body of literature comparing the experiences of African American students at HBCUs and PWIs. Further, by comparing the results for Hispanic and African American students, this study raises important questions about the differences between the histories and environments at HBCUs and HSIs and suggests important next steps in studying minority-serving institutions.

Literature Review

Hispanic and African American Students

Research that illustrates the benefits of actively engaging students in activities, both inside and outside the class, that promote greater outcomes is extensive and addresses a wide range of activities, such as cognitive development (Anaya, 1996; Kuh, 1995); moral and ethical development (Jones & Watt, 1999; Liddell & Davis, 1996); and persistence (Berger & Milem, 1999; Braxton, Milem, & Sullivan, 2000; Tinto, 1993). These studies authenticate the benefits of engaging in these behaviors for students of all ethnic backgrounds. However, inquiries into the areas of effective educational practices indicate that Hispanic and African American students often do not participate at levels that can maximize their involvement and produce the most significant outcomes.

According to existing research, the average Hispanic student is less likely to pursue and complete a baccalaureate degree in comparison to White, African American, and Asian students

(Benitez, 1998; Cejda, Casparis, and Rhodes, 2002; Miller and Garcia, 2004; O'Brien and Zudak, 1998;). Inadequate high school preparation often leads either to high drop-out rates or low college-going rates, which in turn affects the Hispanic baccalaureate pipeline (Garcia, 2001; O'Brien & Zudak, 1998). In addition, Hispanic students face challenges in college that include academic under-preparedness, vestiges of racism, status as first-generation, and culturally significant messages that might cause tensions between pursuing an education and maintaining familial obligations (Dayton, Gonzalez-Vasquez, Martinez, & Plum, 2004; Ortiz, 2004).

The National Center for Educational Statistics (2003) reported that African American students in the late 1990s were most likely to attend public high schools with high concentrations of minorities from low socioeconomic communities, were less likely than White students to take advanced mathematics and science courses, were less likely than Hispanic students to take advanced foreign language classes, and in 2000 were less likely than White or Hispanic students to take advanced placement exams. African American and Hispanic students who advance to postsecondary institutions are often not as prepared academically as their White counterparts, making collegiate success more difficult.

Despite the fact that Hispanics constitute the fastest-growing minority in the United States and even though Hispanic participation in higher education has more than doubled over the past 10 years, their enrollment rate has not kept pace with their population growth (Benitez, 1998; Garcia, 2001; O'Brien & Zudak, 1998). Because many Hispanic populations are concentrated in urban centers, there is a propensity to be located in severely segregated neighborhoods. Citing work by Orfield (1997), O'Brien and Zudak (1998) report, "African Americans and Hispanics are increasingly isolated in inferior schools and that both groups are far more likely than whites to attend schools in areas of concentrated poverty," an assertion also supported by Garcia (2001).

O'Brien and Zudak (1998) found that segregated neighborhoods usually equate to inferior resources, which eventually results in inferior levels of education.

Rendon (1994), who notes that these students are primarily first-generation, uncovered the following issues that Hispanic students face in college: "distrust of institutional infrastructures, fear of failure, fear about asking questions, fear of being perceived as 'stupid' or 'lazy,' cultural separation, doubts about being 'college material,' trauma associated with making the transition to college, and being intimidated by the system" (p. 9). Scholars conducting research on Hispanic students affirm the primary influence of family and community on students' ability and willingness to persist in higher education and find that the challenges they face negatively impact their educational experience, particularly at PWIs (Dayton, et al., 2004; Jones, Castellanos, & Cole, 2002; Laden, 1999, 2000, 2001, 2004; Luhrs, 1995; O'Brien & Zudak, 1998; and Ortiz, 2004; Stern, 1995).

The relatively small amount of literature on Hispanic students at HSIs yields mixed results (Abraham, Lujan, Lopez, & Walker, 2002; Benitez, 1998; Dayton, et al, 2004; Laden, 1999, 2000, 2001, 2004). According to Laden (2004) existing research "suggests that many HSIs offer a variety of academic and student support programs and holistic approaches that are specifically designed to raise Latino student aspirations and enhance their retention and completion rates" (p. 193). Dayton et al. (2004) and Laden (2001, 2004) propose that faculty and administrators, particularly those who are Hispanic, can play a key role in facilitating academic and social integration as well as academic success. However, as the work by Laden (2004) suggests, it is not clear how widespread these benefits are at HSIs and, in fact, some students were not convinced of the value of these relationships.

The student engagement or involvement literature on African American students is also primarily limited to comparisons of African American students' experiences at PWIs versus HBCUs. Wenglisky (1996) found that HBCU students have higher educational aspirations than African American students attending PWIs and that they are more likely to pursue and acquire professional degrees. Numerous scholars (Astin, 1975, 1993; Cross & Astin, 1981; and Pascarella, Smart, Ethington & Nettles, 1987) have found that attending an HBCU increases the potential for a student to persist. Bonous-Hammarth and Boatsman (1996) reported that HBCU students were much more likely to persist than their counterparts at PWIs.

Scholars have consistently found that the supportive and nurturing environment at HBCUs, which avails students of academic and leadership development opportunities, facilitates greater satisfaction, confidence, and academic gains than for African American students attending PWIs (Allen, 1986, 1992; Allen, Epps, & Haniff, 1991; DeSousa & Kuh, 1996; Fleming; 1984, 2001; Flowers & Pascarella, 1999; Watson & Kuh, 1996). Astin's (1975) study is consistent with these findings and further suggests that racial isolation and alienation at PWIs has a negative effect on African American student success. There is also some indication that the homogenous environment at HBCUs does not inhibit African American students' in ways we might assume. For example, Flowers and Pascarella (1999) found that the HBCU environment does not inhibit African American students' openness to racial and cultural diversity.

Davis (1991) surmised that opportunities to participate in student-centered activities at HBCUs that cater to African American students' interests created social support networks that also facilitated student success. This is reflective of the African American and HBCU mission-centered curriculum, pedagogy, and academic and social activities in which students are involved on HBCU campuses, to which Outcalt and Skewes-Cox (2002) attributed higher levels of

extracurricular and academic involvement. A study by the USAGroup Foundation (Redd, 2000) reveals that this level of engagement continues after students graduate from HBCUs and become active in community and volunteer service.

There is some evidence that the negative effects of PWIs and the positive effects of HBCUs may not be consistent across all outcomes. Cabrera et al. (1999) found that African American students' cognitive outcomes are more shaped by prior academic ability than perceptions of discrimination and prejudice. Similarly, a study by Kim (2002) raises questions about whether there are certain outcomes (e.g., academic ability) for which the differences found between African American students at HBCUs and PWIs are attributable more to differences between the students than to the institutional environments. However, the bulk of the evidence supports the idea that there is a significant institutional effect for HBCUs on many outcomes.

Collectively, the research on Hispanic and African American students suggests that these two groups of students face serious challenges, although not identical sets of challenges, when they attend PWIs. These challenges present a major hurdle for engagement on these campuses and consequently can affect students' chances for academic success and persistence. There is strong evidence to suggest that HBCUs reduce some of the barriers to engagement and facilitate greater success among African American students. Although Hispanic students face these challenges and hurdles at PWIs, there is not a parallel body of work documenting how Hispanic students differentially benefit from attending an HSI versus a PWI. In fact, given the differences in how HBCUs and HSIs developed, there is room to speculate that the differential for Hispanic students at HSIs compared to PWIs is probably less than that for African American students at HBCUs compared to PWIs.

HSIs and HBCUs

We must note that HBCUs and HSIs differ in significant ways, as is obvious in their institutional legacies and cultures. HBCUs were created expressly for the purpose of educating African Americans and for years served as the only postsecondary option for the vast majority of this group of Americans. One of the positive legacies of this history is that the environments on these campuses seem particularly well-suited for promoting collegiate success among African American students. In contrast, HSIs evolved as a result of demographic shifts and changes. Laden (2001) more specifically suggests that the presence of HSIs is the result of shifting social, political, economic, and demographic issues over the past 30 years.

In response to mounting legal issues that arose from the Civil Rights Movement, higher education became more accessible to Hispanic Americans. Scholars (Benitez, 1998; Laden, 2001; Justiz, Wilson, & Bjork, 1994; Wolanin, 1998) cite the fact that the ensuing reforms led to the creation of financial aid programs as well as an increase in the level of access for first-generation, low-income, and underrepresented populations. As the Hispanic population increased during the following 30 years, students who desired to pursue higher education began to attend institutions located in their population centers. As a result these campuses eventually found themselves with a critical mass of Hispanic students. With their growing service to Hispanic communities, leaders from the Hispanic higher education arena worked to ensure that HSIs received their fare share of governmental support. The well-organized efforts of the Hispanic Association of Colleges and Universities (HACU) eventually led to an amendment during the 1992 reauthorization of the Higher Education Act (HEA). This legislative stipulation specified that to be considered an HSI, at least 25% of the undergraduate population must be Hispanic and 50% of that contingent of students must be first-generation or low-income. These guidelines

entitle HSIs to government funds under Title III of the HEA. This brief history of HSIs illustrates that HSIs were not founded and did not historically evolve as mission-based institutions specifically intended to educate Hispanic students, which makes them quite distinct from HBCUs.

In terms of promoting student success, some criticism cuts across all types of MSIs. For example, there are scholars who contend that the predominantly Hispanic population within an HSI is not representative of the world in which students will exist once they leave the institution (Stern, 1995). Dayton et al. (2004) note that "achieving a balance between promoting the supportive environment and readying students for employment in less supportive environments is also a challenge perpetually encountered by other MSIs" (p. 33).

As we have seen, HBCUs appear to provide an environment that encourages student engagement, retention, and success. There is also evidence to suggest that there are Hispanic-centered faculty, administrators, and programs at HSIs and that these institutional resources can have similarly positive effects on Hispanic students. However, it is not clear from the research that these positive effects spread as widely across the Hispanic student body at HSIs as they do at HBCUs for African American students.

Given our understanding of HSIs and HBCUs and their potential benefits for those groups of students they report to "serve," the current study was guided by the following questions. How do Hispanic student engagement, satisfaction, and self-reported gains from college differ at HSIs and PWIs? Since the research on African American students at HBCUs is so consistently positive, will a comparison of the results for African American students at HBCUs and PWIs and Hispanic students at HSIs and PWIs reveal similar patterns? What do the patterns suggest about these students' experiences at the different types of institutions?

Methods

Data Source

The National Survey of Student Engagement (NSSE) collects data from hundreds of thousands of undergraduates across the nation each year. NSSE is designed to explore the ways and manners by which undergraduate students engage in their campus communities. The National Survey of Student Engagement is grounded in the belief that the frequency with which students engage in particular educational activities provides a meaningful proxy for institutional quality. Thus, the survey measures the degree to which college students participate in an array of educationally effective activities.

With 437 institutions participating, the NSSE 2003 sample included more than 348,000 first-year and senior students who were selected randomly from the data files provided by participating institutions. The number of students sampled at each institution depends on the total undergraduate enrollment of the institution, and equal numbers of first-year students and seniors are sampled. Institutions participating in NSSE are given the option of administering the survey electronically via the web or on paper. In the 2003 NSSE administration, approximately 48% of students completed traditional paper surveys, with 52% using the web version. The average institutional response rate for NSSE 2003 was 43%, with a range of 14% to 70% across the various institutions; resulting in responses from 147,166 students.

The race/ethnicity distribution of the NSSE 2003 sample reflects a slight overrepresentation of White, Asian/Pacific Islander, and American Indian/Alaska Native students, and a slight under-representation of African American students. Of all respondents, 8% were African American, 8% were Hispanic American, 79% were Caucasian/White, 6% were Asian/Pacific Islander, and 7% of other or multiple racial/ethnic identities. Approximately two-thirds of the

2003 respondents, or 66%, were female students. This proportion is higher than the percent of female students enrolled in the NSSE 2003 participating institutions (55%): a characteristic that is consistent with other large-scale survey projects where women are more likely to respond than men. Approximately 89% of respondents in the NSSE 2003 sample were enrolled as full-time students. Finally, more than one third of the sample (36%) indicated that they had been enrolled in one or more institutions in addition to the one they were currently attending.

Measures

In this study, we focus on measures of students' engagement in effective educational practices, a measure of their satisfaction with college, and a self-reported measure of how much students believe they gained from their college experience in terms of personal and intellectual development. Three of five scales that capture students' participation in effective educational practices (Kuh, 2001, 2003) are among the measures upon which we focused: active and collaborative learning, student-faculty interaction, and supportive campus environment. The items included in each of these scales are listed in Table 1. Active and collaborative learning is a seven-item measure of the extent to which students are actively involved in their own learning process and engaged in activities that reflect their learning through real world problems. The six items within the student-faculty interaction scale measure the frequency and level of interaction students have with faculty at their institution in and outside of class. The six items that comprise the supportive campus environment scale measure the perceptions students have about the academic and non-academic support they receive and the quality of their relationships with others (students, faculty, and administrators) on campus.

Table 1.
Dependent Variables

Scale and Component Items
Higher order thinking (4-items; α = 0.83, Hispanic; α = 0.84, African American)
Analyzing the basic elements of an idea, experience, or theory, such as examining a particular case or situation in depth and considering its components; Synthesizing and organizing ideas, information, or experiences into new, more complex interpretations and relationships; Making judgments about the value of information, arguments, or methods, such as examining how others gathered and interpreted data and assessing the soundness of their conclusions; Applying theories or concepts to practical problems or in new situations
Active and collaborative learning (7-items; α = 0.65, Hispanic; α = 0.69, African American)
Asked questions in class or contributed to class discussions; Made a class presentation; Worked with students on projects during class; Worked with classmates outside of class to prepare class assignments; Tutored or taught other students (paid or voluntary); Participated in a community-based project as part of a regular course; Discussed ideas from your readings or classes outside of class
Student-faculty interaction (6-items; α = 0.77, Hispanic; α = 0.77, African American)
Discussed grades or assignments with an instructor; Talked about career plans with a faculty member or advisor; Discussed ideas from your readings or classes with faculty members outside of class; Received prompt feedback from faculty on your academic performance; Worked with faculty members on activities other than coursework
Supportive campus environment (6-items; α = 0.76, Hispanic; α = 0.76, African American)
Emphasize: Provided the support needed to succeed academically; Emphasize: Helping cope with non-academic responsibilities (work, family, etc.); Emphasize: Providing the support you need to thrive socially; Quality: Your relationships with other students; Quality: Your relationships with faculty members; Quality: Your relationships with administrative personnel and offices
Satisfaction with college (2-items; α = 0.77, Hispanic; α = 0.74, African American)
Evaluate your entire educational experience at this institution; If you could start over again, would you go the same institution you are now attending
Gains in overall development (15-items; α = 0.92, Hispanic; α = 0.92, African American)
Acquiring a broad general education; Acquiring job or work-related knowledge and skills; Writing clearly and effectively; Speaking clearly and effectively; Thinking critically and analytically; Analyzing quantitative problems; Using computing and information technology; Working effectively with others; Voting in local, state, or national elections; Learning effectively on your own; Understanding yourself; Understanding people of other racial and ethnic backgrounds; Solving complex real-world problems; Developing a personal code of values and ethics; Contributing to the welfare of your community

Note: All scales have a range from 1 to 4.

Three additional measures are included in the study: higher order thinking, satisfaction with college, and self-reported gains in overall development. Items included in these measures are also in Table 1. The higher order thinking measure reflects the degree to which coursework at a student's institution contributes to skills such as analysis of basic ideas, synthesis and organization of ideas into new interpretations and relationships, judgments regarding the value of information or arguments, and application of theories and concepts to practical problems. Satisfaction with college measures the degree to which students feel satisfied with their overall

educational experience. Finally, gains in overall development include the extent to which students perceive their educational experience has contributed to their knowledge, skills, and personal development such as acquiring a broad general education, writing skills, and developing a personal code of ethics.

In one set of our effect size calculations we control for several student and institutional characteristics which are known to influence student engagement. See Appendix A for a list of these variables and a description of how each is measured.

Samples

The two separate samples used in this study consist of African American seniors at PWIs and HBCUs and Hispanic seniors at PWIs and HSIs that responded to NSSE in 2003. We identified HSI institutions by using the member list of Hispanic Association of Colleges and Universities (www.hacu.net) and HBCU institutions based on their IPEDS designation. We identified PWIs as any institution that was not an HSI, HBCU, or tribal college (also an IPEDS designation).

We restricted the samples to seniors as they have had more experience within the institutional environments we are comparing. After these limits and deletion for missing data, the samples consist of 2896 African American seniors from 334 PWIs, 1852 African American seniors from 20 HBCUs, 2149 Hispanic seniors from 321 PWIs, and 2028 Hispanic seniors from 26 HSIs.

Of the African American seniors at both types of institutions, approximately three-fourths of the respondents are women, about 7% are athletes, and slightly less than 35% live on campus. African American seniors at HBCUs are more likely than their PWI counterparts to be younger (average age of 26.6 years versus 29.1 years at PWIs), have mothers that at minimum attended

some college, have become a member of a fraternity or sorority (18% versus 12% at PWIs), and are enrolled full-time (86% versus 76% at PWIs). They are, however, less likely to be transfer students (27% versus 47% at PWIs).

Most of the Hispanic seniors are enrolled full-time (77% at HSIs and 80% at PWIs) while very few are athletes (2% at HSIs and 5% at PWIs) or members of fraternities or sororities (8% at HSIs and 11% at PWIs). Hispanic seniors at HSIs are more likely to be female (68% versus 64% at PWIs), older (average age of 28.2 years versus 26.5 at PWIs), and to have transferred from another institution (51% versus 44% at PWIs). They are, however, less likely to live on campus (10% versus 34% at PWIs) or have mothers that have attended college.

Analysis

For each sample, means for the two groups (students at PWIs versus students at an HBCU or HSI) are compared in two different ways for each of the six measures in Table 1. First, a t-test is used and an effect size (the mean difference divided by the pooled standard deviation) is calculated based on the t-test results to give a more meaningful estimate of the difference between the groups. Second, using regression analysis, an effect size is estimated that takes into account the influence of various student background characteristics (e.g., gender and age) and several collegiate experience variables (e.g., living on campus and fraternity/sorority membership) as well as a couple of institutional characteristics (e.g., undergraduate enrollment). All non-dichotomous variables are standardized prior to entry into the regression analyses. As a result, the regression coefficient is an estimate of the effect size after controlling for the other variables in the model.

Limitations

Although the institutions that participated in NSSE 2003 mirror all U.S. colleges and universities in terms of several institutional characteristics such as Carnegie classification and control, generalizations from NSSE 2003 are limited because some institutions choose to participate while others do not. In this particular study, this means that our results and conclusions most appropriately apply to those institutions in the study. Generalizations beyond the 20 HBCUs and 26 HSIs in the study should be made and read with caution.

In addition, the comparisons made between students at the different types of institutions are made without controlling for pre-college measures of students levels of engagement, their predisposition to be satisfied with college, or precursors to the gains items. Consequently, it is possible that differences found between groups of students could be attributable to differences in institutional contexts or differences in the groups of students that existed prior to college.

Results

Tables 2 and 3 present the results of the mean comparisons for African American and Hispanic seniors, respectively. The results suggest that the average African American senior at an HBCU reports significantly higher levels of engagement and gains in overall development than the average African American senior at a PWI. In particular, African American seniors at HBCUs were much more likely than their counterparts at PWIs to report higher levels of active and collaborative learning, student-faculty interaction, and gains in overall development. Even after controlling for several student characteristics (e.g., gender, age, fraternity or sorority membership) and a couple of institutional characteristics (public/private status and size), the effect sizes for these measures remain relatively high (above 0.30 for the two engagement

measures and above 0.20 for the gains measure), suggesting a meaningful difference between the two groups.

Table 2.
Mean Comparisons for African American Seniors at PWIs and HBCUs

	PWI		HBCU		Mean	Effect	Effect Size with
Scale	Mean	SD	Mean	SD	Diff	Size[a]	Controls[b]
Higher order thinking	3.13	0.69	3.21	0.68	0.08	0.11***	0.06
Active & collab learning	2.53	0.50	2.74	0.53	0.22	0.42***	0.33***
Student-faculty interaction	2.37	0.64	2.64	0.66	0.28	0.42***	0.30***
Supportive campus env	2.73	0.57	2.82	0.59	0.09	0.16***	0.10**
Satisfaction with college	3.07	0.73	3.09	0.75	0.02	0.03	0.04
Gains in overall development	2.91	0.62	3.10	0.63	0.19	0.29***	0.23***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

[a] The effect size is the mean difference divided by the pooled standard deviation.

[b] Effect size with controls is the unstandardized regression coefficient for the institutional type variable (PWI versus HBCU) from analyses where all non-dichotomous variables were standardized. Controls include student characteristics (background and college experiences), undergraduate enrollment, and institutional control.

Relatively small, but significant differences exist between African American seniors at HBCUs and PWIs in terms of how much their courses emphasize higher order thinking and how supportive they view their collegiate environment, with seniors at HBCUs reporting higher scores on these measures. As with most other measures in the analyses, the effect sizes drop when control variables are introduced and, in the case of higher order thinking, the difference is no longer significant.

The mean difference between the two groups of African American seniors was quite small for their satisfaction with college. Although this result seems to contradict some prior work on differences between HBCUs and PWIs (e.g., Allen, 1986), this result is consistent with other

analyses on NSSE data that have found few differences in levels of satisfaction across types of students as well as types of institutions.

In contrast to the results for African Americans, the average Hispanic senior at an HSI looks quite similar to the average Hispanic senior at a PWI in terms of engagement, satisfaction with college, and gains in overall development. The largest differences between the two groups of Hispanic students were on active and collaborative learning, student-faculty interaction, and gains in overall development. However, the effect sizes are generally small (around 0.10) and, in the instance of student-faculty interaction, students at PWIs score higher although the effect size is almost zero when controls are introduced.

Table 3.
Mean Comparisons for Hispanic Seniors at PWIs and HSIs

	PWI		HSI		Mean	Effect	Effect Size with
Scale	Mean	SD	Mean	SD	Diff	Size[a]	Controls[b]
Higher order thinking	3.15	0.67	3.16	0.69	0.00	0.00	0.05
Active & collab learning	2.51	0.49	2.55	0.52	0.04	0.07*	0.11**
Student-faculty interaction	2.38	0.65	2.30	0.65	-0.08	-0.12***	-0.01
Supportive campus env	2.77	0.57	2.77	0.57	0.00	0.01	0.08*
Satisfaction with college	3.21	0.70	3.17	0.69	-0.04	-0.06	0.00
Gains in overall development	2.93	0.61	2.99	0.62	0.05	0.09**	0.13***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

[a] The effect size is the mean difference divided by the pooled standard deviation.

[b] Effect size with controls is the unstandardized regression coefficient for the institutional type variable (PWI versus HSI) from analyses where all non-dichotomous variables were standardized. Controls include student characteristics (background and college experiences), undergraduate enrollment, and institutional control.

Although we were primarily interested in differences across groups within each racial/ethnic category, the lack of differences between Hispanic seniors at HSIs and PWIs led us to wonder whether Hispanic students, in general, score higher or lower than other students. A

quick comparison at the first column of means in Tables 2 and 3 reveals that Hispanic and African American seniors at PWIs have nearly identical scores on each of the six scales. Combined with the other results, this suggests that African American seniors at HBCUs stand out among the students in this study as being more engaged and reporting greater gains from their collegiate experience.

Discussion and Implications

The results of this study provide further evidence that African American students at HBCUs are more engaged and have a sense that they gain more from college than their counterparts at PWIs. The particularly large differences for active and collaborative learning and student-faculty interaction suggest that the students and faculty at the HBCUs in this study are working together to a greater degree than students and faculty at PWIs to get students involved in the practices and relationships that lead to desirable educational outcomes. The slightly weaker, yet sizable difference for gains in overall development suggest that African American seniors at HBCUs sense that they are learning and developing as a result of their collegiate experience to a greater degree than African American seniors at PWIs.

Interestingly, particularly since scholars have posited that a main reason for the relative success of HBCUs is their supportive environments, the differences between African American seniors at HBCUs and PWIs was relatively small for the supportive campus environment measure. One possible explanation of this finding is that the notion of supportive environment captured by the measure in this study does not entirely capture what scholars mean when they talk about the supportive environments at HBCUs.

In contrast to the findings for African American seniors at HBCUs, Hispanic seniors at HSIs were found to score similarly to Hispanic seniors at PWIs on most of the measures in the

study. For active and collaborative learning as well as gains in overall development, the Hispanic seniors at HSIs score modestly higher than the Hispanic seniors at PWIs after controlling for student and institutional characteristics.

There are several possible explanations for the difference in the patterns of the effects seen for the Hispanic and African American students in this study. From one perspective, we can consider HSIs as in a process of evolution that will bring them from predominantly serving the needs of white students (nearly all were formerly PWIs) to fully serving the needs of Hispanic students. The relatively few and modest differences in this study for Hispanic students may indicate that, on average, the HSIs in this study are still early in that process. The contrast to the results for HBCUs may then be attributable to HBCUs' longer standing mission and tradition of serving the educational needs of African American students.

Alternatively, we can question whether there are meaningful differences between the students that choose to attend HSIs, HBCUs, and PWIs. For example, the African American students in this study that attend HBCUs tend to be younger and have mothers with higher levels of education, and they are more likely to be enrolled full-time. Although differences still exist even after statistically controlling for these differences, these differences may be an indication that students who attend HBCUs are more inclined to engage and gain from college upon entry into their collegiate experience, differences that may not have been fully controlled for in our models.

The story is the opposite for Hispanic students attending HSIs. Compared to their counterparts at PWIs, the Hispanic seniors in this study tend to be older and to have transferred from another institution. If we assume that this indicates that Hispanic students start their education at an HSI with a relative disadvantage in terms of engagement and gaining from their

experience, then the lack of difference may actually indicate a reversal of the initial disadvantage.

Additional explanations are possible and should be explored, as they lead us toward important areas for additional research. To illustrate, we need only look at the two explanations offered above. It is clear from this study that future work in this area should try to account more fully for the differences that may exist between the students at PWIs and MSIs. Additionally, work is needed to further expand our understanding of the experience of Hispanic students on HSI campuses. Are some HSIs serving Hispanic students better than others? If so, what explains the differences—is it history, campus culture, campus practices, or the students?

Conclusion

With regard to African American students at HBCUs, this study is consistent with a large body of work that suggests that students at those institutions engage to a greater degree in effective educational practices and consequently gain more from their collegiate experience when compared to their counterparts at PWIs. With regard to Hispanic students, this was largely an exploratory study aimed at determining whether differences in engagement, student satisfaction, and students' perceptions of their gains from college between seniors at HSIs and PWIs mirrored those found for African American students. That the patterns did not match was not entirely a surprise given the different histories and make up of HBCUs and HSIs. Rather than suggesting that this is an indication that HSIs do not serve Hispanic students to the same degree that HBCUs serve African Americans, the results of this study point us toward asking more refined and deeper questions which will help expand our understanding of HSIs and how they, in fact, do serve the educational needs of Hispanic students.

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Appendix A.
Control Variables

Name	Description
Gender	0 = Male; 1 = Female
Age	Continuous
Mother's Education Level	1 = Did not finish high school, 2 = graduated from high school, 3 = attended college but did not complete, 4 = completed an Associate's degree, 5 = completed a Bachelor's degree, 6 = completed a master's degree, 7 = completed a Doctoral degree
Fraternity or Sorority Membership	0 = Non-member; 1 = Member of a social fraternity or sorority
Student Athlete	0 = Non-athlete; 1 = Student athlete on a team sponsored by the institution's athletic department
Live on campus	0 = Live off campus; 1 = Live in a dormitory or other campus housing (not fraternity or sorority house)
Enrollment Status	0 = Part-time; 1 = Full-time
Transfer Status	0 = Did not transfer; 1 = Tranfered
Major[a]	Arts and Humanities, Biological Sciences, Business, Education, Engineering, Physical Science, Professional, Social Science, Other, Undecided
Undergraduate enrollment	Total number of baccalaureate degree seeking students
Institutional control	0 =Public; 1 = Private

[a] Coded dichotomously (0 = not in group, 1 = in group) by racial/ethnic group for regression analyses